

Title (en)

High impact strength powder metal part and method for making same.

Title (de)

Pulvermetallkörper mit hoher Kerbschlagzähigkeit und Verfahren zu seiner Herstellung.

Title (fr)

Article en poudre métallique ayant une résilience élevée, et son procédé de fabrication.

Publication

EP 0214725 A1 19870318 (EN)

Application

EP 86305440 A 19860715

Priority

- US 75528285 A 19850715
- US 86618486 A 19860520
- US 87950286 A 19860625

Abstract (en)

A copper infiltrated ferrous powder metal part infiltrated with copper or a copper alloy characterized as having after infiltration a residual uninfiltrated porosity of less than about 7 volume percent and a maximum pore size of the residual uninfiltrated porosity of less than about 125 micrometers, said porosity and pore size values being taken from a worst field of view in a functionally critical area of said metal part. Preferably, the part has an overall density of at least 7.50 g/cm³ and a diffusion depth of copper into the steel matrix of less than about 4 micrometers as determined by chemical etching or less than about 8 micrometers as determined by electron dispersive X-ray analysis (EDXA).

IPC 1-7

B22F 3/26; **C22C 33/02**

IPC 8 full level

B22F 3/26 (2006.01); **C22C 33/02** (2006.01)

CPC (source: EP)

C22C 33/0242 (2013.01); **B22F 2998/00** (2013.01)

C-Set (source: EP)

B22F 2998/00 + **F16C 7/023**

Citation (search report)

- [X] US 4491558 A 19850101 - GARDNER RICHARD N [US]
- [A] FR 2157563 A5 19730601 - BRICO ENG
- [X] E. KLAR: "Metals handbook", 9th edition, vol. 7, Powder metallurgy, 1984, pages 557-559, American Society for Metals, Ohio, US;

Cited by

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Designated contracting state (EPC)

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DOCDB simple family (publication)

WO 8700463 A1 19870129; AT E71669 T1 19920215; AU 589441 B2 19891012; AU 6194386 A 19870210; CA 1297705 C 19920324; DE 3683428 D1 19920227; EP 0214725 A1 19870318; EP 0214725 B1 19920115; ES 2000348 A6 19880216; IN 170771 B 19920516

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